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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,578	03/12/2004	Richard Levy	01064.0011-16-000	6458

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EXAMINER

GOLOBOY, JAMES C

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/799,578

Applicant(s)

LEVY, RICHARD

Examiner

James Goloboy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/29/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/12/2004, 4/29/2004, 11/02/2005.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 52-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether Claims 52-56 require the polymerization to be conducted on a wire, cable, or surface, or if they merely require the polymerization product to be coated on a wire, cable or surface.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 30, 32, 35-36, 45, and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Suskind (U.S. Pat. No. 5,539,019).

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Suskind, in the reference's Claim 1, describes a process for polymerizing monomers into a hydrogel forming polymer in the presence of water resistant particles such that the particles are encapsulated by the polymeric hydrogel. In column 1 lines 53-55 and columns 5 lines 25-35, Suskind discloses that the hydrogel forming polymers are superabsorbent polymers (SAP), as recited in Claim 30, and in column 5 lines 36-50 Suskind teaches that the hydrogel forming polymers may be polyacrylic acid or starch graft copolymers acrylic acid, acrylonitrile, or acrylic ester, as recited in Claim 32. In column 5 line 11 Suskind further discloses that the water resistant particles may be antimony oxide or talc, which are solid inorganic lubricants as recited in Claims 30 and 34-36. The process of Suskind's Claim 1 therefore meets the limitations of Claims 30, 32, and 34-36, while the product of the process meets Claim 51. In column 5 line 19-20, Suskind discloses that flour and wood flour, which are solid organic lubricants as recited in Claim 45, are also suitable water resistant particles.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of *Van Nostrand's Scientific Encyclopedia, Seventh Edition*.

The discussion of Suskind in paragraph 4 above is incorporated here by reference. Suskind discloses the process of Claim 35, and also that "one or more" inorganic mineral may be used in the process. Suskind further discloses that the minerals described on pages 1864-65 of *Van Nostrand's Scientific Encyclopedia, Seventh Edition* may be used in the process, but does not teach specific minerals.

*Van Nostrand's Scientific Encyclopedia*, in the table on pages 1864-65, lists many minerals corresponding to the lubricants recited in Claim 36. Mixtures of these minerals can be used to satisfy Claims 37-42. In column 5 of the table on Page 1865 of *Van Nostrand's Scientific Encyclopedia*, molybdenum disulfide (Molybdenite) and antimony sulfide (stibnite) are disclosed and therefore included in Suskind, the use of these minerals and mixtures thereof meets Claims 37-40. Use of the other sulfides listed in *Van Nostrand's Scientific Encyclopedia* to form a three- or four-component mixture satisfies the conditions of Claims 41 and 42.

In column 2 of the table on page 1865 of *Van Nostrand's Scientific Encyclopedia*, phosphates, as recited in Claim 43, are disclosed and therefore suitable for use as the inorganic mineral in Suskind. Specifically, iron phosphate (vivianite) and iron manganese phosphate (triphylite), as recited in Claim 44, are disclosed.

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It would have been obvious to one of ordinary skill in the art to use the inorganic minerals of *Van Nostrand's Scientific Encyclopedia* in the process of Suskind, due to the teaching in column 5 lines 13-15 of Suskind.

8. Claims 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of Hansen (U.S. Pat. No. 5,300,192).

The discussion of Suskind in paragraph 4 above is incorporated here by reference. Suskind discloses the process of Claims 30 and 32, and in column 1 lines 10-45 discloses that the products of the process are placed upon a layer of fibers. Suskind does not disclose a process step of adding a binder.

Hansen, in column 5 lines 17-23, teaches that a superabsorbent polymer may be bound to fibers with the aid of a binder, as recited in Claims 31 and 33, and from column 40 line 60 through column 42 lines 18 teaches that a thermoplastic binder may be used. The use of the binder of Hansen in the process of Suskind therefore meets Claims 31 and 33.

It would have been obvious to one of ordinary skill in the art to use the binder of Hansen in the process of Suskind to aid in binding the superabsorbent polymers of Suskind to fibers, as taught in column 6 lines 24-53 of Hansen.

9. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of Marciano-Agostinelli (U.S. Pat. 5,049,593).

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The discussion of Suskind in paragraph 4 above is incorporated here by reference. Suskind discloses a process including a solid organic lubricant in accordance with Claim 45, but does not disclose the solid organic lubricants recited in Claim 46.

Marciano-Agostinelli, in the reference's Claim 1, discloses a filling composition for the interstices between wires, comprising an absorbent (water-swellaable) polymer and a low molecular weight polymer. In the reference's Claim 2, Marciano-Agostinelli teaches that the low molecular weight polymer may polyisobutylene rubber, a lower alkylene polymer as recited in Claim 46. As the rubber is water insoluble, it may be used as the particle in the process of Suskind; therefore, the formation of the composition of Marciano-Agostinelli through the method of Suskind meets the limitations of Claim 46.

It would have been obvious to one of ordinary skill in the art to use the rubber polymer of Marciano-Agostinelli as the water insoluble particle in the process of Suskind, as Marciano-Agostinelli teaches in column 2 lines 35-39 that the resulting product helps prevent failure due to water/chemical treeing in high-voltage cables.

10. Claims 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of Freeman (U.S. Pat. No. 5,218,011).

The discussion of Suskind in paragraph 4 above is incorporated here by reference. Suskind discloses a process meeting Claim 32, but does not disclose a process where the material for decreasing friction comprises a petroleum oil lubricant, grease, or silicone.

Freeman, in the abstract, discloses a composition comprising a gel matrix and an absorbent polymer, such as those produced by the process of Suskind. In column 7 lines 20-22, Freeman teaches that the gel matrices may comprise silicones, as recited in Claim 50, or petroleum gels, a petroleum oil lubricant as recited in Claim 49. Freeman also teaches that polyalphaolefins, which are well known in the art to be usable as a metalworking fluid, are also suitable for use, meeting Claim 47. In column 13 line 5 (Example 13), Freeman shows that grease, namely a fluorinated grease, as recited in Claim 49, may also be used in a gel matrix.

It would have been obvious to one of ordinary skill in the art to include the gel matrix of Freeman in the process of Suskind, particularly as solvents in the polymerization step, in order to form a composition that protects wires from water, as taught in the abstract of Freeman.

11. Claims 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind in view of Freeman (U.S. Pat. 5,461,195).

The discussion of Suskind in paragraph 4 above is incorporated here by reference. Suskind discloses the process of Claims 30 and 32, but does not disclose coating the product of the polymerization on a surface, wire, or cable.

In Figure 2, Freeman teaches a cable **10**, which houses bundles of wires **14**. Within each bundle there are several pairs of wires **12**, with a space **40** between them. In column 9 lines 41-44 Freeman teaches that the space **40** is filled with a gel composition comprising an absorbent polymer, such as that produced by the process of

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Suskind, and in column 3 lines 42-46 teaches that the composition coats the wire, as recited in Claims 53 and 55. Figure 2 of Freeman also contains a space 42, which is the area within the cable not taken up by the bundles of wires. In column 9 lines 45-46 Freeman teaches that this space may also be filled with the absorbent composition, thereby coating the inner surface of the cable, as recited in Claims 54 and 65. As the wire and cable are both surfaces, Claim 52 is met, and the products of Claims 52-56 meet the limitations of Claims 57-58.

It would have been obvious to one of ordinary skill in the art to include in the process of Suskind the step of coating the polymerization product on a wire or cable, as taught by Freeman, because the superabsorbent polymer eliminates shorts caused by moisture contact with the wires, as taught in the abstract of Freeman.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is 571-272-2476. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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